## Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

## Listing of Claims:

Claim 1 (currently amended): A method for defining hardware routing paths in a network having IP paths and MPLS paths to a destination node, the method comprising:

receiving path information for a plurality of paths in a path group, the path group comprising both IP and MPLS paths, each of the IP paths represented by an IP address and each of the MPLS paths represented by a label;

assigning a unique path ID for each path within the path group, the path ID for each path comprising an IP address;

comparing all path IDs in each path group; and

assigning a common hardware resource to groups having matching path IDs;

wherein the path ID assigned for each of said IP paths comprises a unicast IP address and the path ID assigned for each of said MPLS paths comprises a unique IP multicast address, the IP multicast addresses assigned to said MPLS paths comprising a common prefix that is different than a prefix of the unicast IP addresses and said path IDs.

Claim 2 (canceled).

Claim 3 (original): The method of claim 2 wherein the unicast IP address corresponds to the IP path's next hop IP address.

Claim 4 (canceled).

Claim 5 (previously presented): The method of claim 1 wherein assigning a unique IP multicast address comprises assigning a unique IP address from an internal managed group of IDs.

Claim 6 (original): The method of claim 5 wherein the internal managed group of IDs is sufficiently large to represent all network hardware paths.

Claim 7 (original): The method of claim 5 wherein assigning a unique IP address comprises assigning a unique IP address for each software MPLS path entity.

Claim 8 (original): The method of claim 7 further comprising returning an assigned unique IP address to the group of internal managed IDs when a path entity is deleted.

Claim 9 (original): The method of claim 1 further comprising sorting the paths in each of the path groups.

Claim 10 (original): The method of claim 9 wherein sorting the paths comprises sorting the paths by the value of the path ID.

Claim 11 (original): The method of claim 1 further comprising building a database containing all path groups and using the database to compare the group paths.

Claim 12 (currently amended): A system for defining hardware routing paths in a network having IP paths and MPLS paths, the system comprising:

a processor operable to receive path information for a plurality of paths in a path group, the path group comprising both IP and MPLS paths, each of the IP paths represented

by an IP address and each of the MPLS paths represented by a label, assign a unique path ID for each path within the path group, the path ID for each path comprising an IP address, compare all path IDs in each path group, and assign a common hardware resource to groups having matching path IDs; and

memory for storing the path IDs;

wherein the path ID assigned for each of said IP paths comprises a unicast IP address and the path ID assigned for each of said MPLS paths comprises a unique IP multicast address, the IP multicast addresses assigned to said MPLS paths comprising a common prefix that is different than a prefix of the unicast IP addresses and said path IDs.

Claim 13 (canceled).

Claim 14 (canceled).

Claim 15 (original): The system of claim 12 wherein the path IDs assigned for MPLS paths comprise broadcast IP addresses of form 255.x.x.x.

Claim 16 (original): The system of claim 12 further comprising a database of multicast IP addresses sufficiently large to represent all network hardware paths.

Claim 17 (currently amended): A computer program product for defining hardware routing paths in a network having IP paths and MPLS paths, the product comprising:

code that receives path information for a plurality of paths in a path group, the path group comprising both IP and MPLS paths, each of the IP paths represented by an IP address and each of the MPLS paths represented by a label; code that assigns a unique path ID for each path within the path group, the path ID for each path comprising an IP address;

code that compares all path IDs in each path group;

code that assigns a common hardware resource to groups having matching path IDs; and

a computer-readable storage medium for storing the codes and the path IDs;

wherein the path ID assigned for each of said IP paths comprises a unicast IP address and the path ID assigned for each of said MPLS paths comprises a unique IP multicast address, the IP multicast addresses assigned to said MPLS paths comprising a common prefix that is different than a prefix of the unicast IP addresses and said path IDs.

Claim 18 (previously presented): The method of claim 1 further comprising programming entries in a route table and adjacency table to define hardware resources.

Claim 19 (canceled).

Claim 20 (previously presented): The method of claim 1 wherein said path group comprises paths having corresponding source routers and destination routers.

Claim 21 (previously presented): The method of claim 1 wherein said common hardware resource is a hardware path.

Claim 22 (previously presented): The method of claim 1 wherein comparing said path IDs comprises comparing path IDs in a prefix's path group.

Claim 23 (previously presented): The method of claim 3 wherein the IP multicast address is obtained from a pool of identifiers.

Claim 24 (canceled).